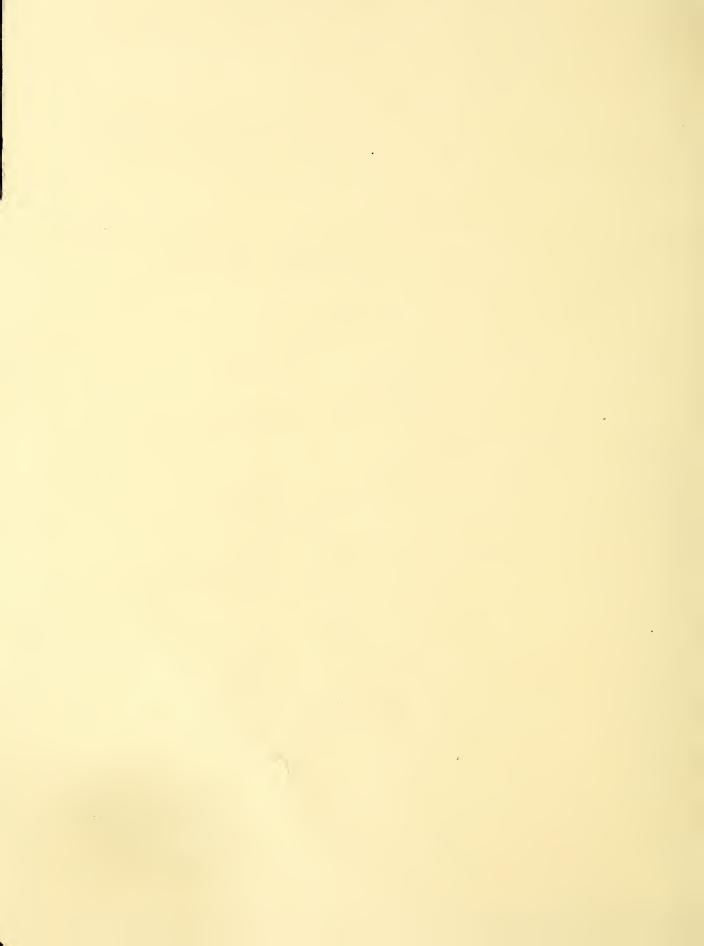
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#### FOREIGN-LANGUAGE TRANSLATIONS

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## FOREST PRODUCTS RESEARCH RESULTS

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Translation No.	Author, Title, and Source
76	THUNELL, B., and HILTSCHER, R. Tension of frame saws in operation (Die Beanspruchung von Gattersägeblättern im Betrieb). Svenska Traforskningsinstitutet, Trätekniska Avdelningen, Meddelande 21B, Stockholm 1951. Reprinted from Holz als Roh- und Werkstoff 9:232-242 (1951). Translated by H. Kipp. 34 pages.
77	THUNELL, BERTIL. Frame saw blades (Synpunkter pa ramsagblad). Reprint from Fagersta Forum No. 3, Stockholm 1951. Translated by H. Kipp. 13 pages.
94	BARTUNEK, RICHARD. The importance of the alkali solubility of cellulose for the viscose industry (Die Bedeutung der Alkalilöelichkeit von Cellulose für die Viskose-Industrie). Das Papier 6:7/8:120-122 (April 1952). Translated by H. Kipp. 9 pages.
99	CZEPEK, RUDOLF. Theory and practice of high temperature wood drying (Theorie und Praxis der Hocktemperatur-Holztrocknung). Holz als Roh- und Werkstoff 10:1:1-6 (January 1952). Translated by H. Kipp. 15 pages.
105	SWEDISH standards for wood construction (Träkonstruktioner). Pocket manual for lumber and the building materials industries 1951 (Fick-Kalender för Trävaru- och Byggnadsmaterialhandeln 1951). Published by the Central Assn. of Swedish Lumber Dealers. Sections of strength of wooden structures, pages 128-136, and on fiberboards, pages 205-208. Translated by B. Ulvestad. 9 pages.

- ORLOV, I. I. Continuous tapping of Pinus silvestris in the USSR (Za dlitel'nuiu podsochku sosny). Lesnaia promyshlennost' 11:3:28-29 (March 1951). Translated by H. Kipp. 8 pages.
- IVAHOV, Iu. M. Limit of plastic flow of wood: A new theory of the mechanical strength of wood (Predel plasticheskogo techeniia drevesiny: Osnovaniia novoi teorii mekhanicheskoi prochnosti drevesiny). Moscow 1941.

  Translated by H. P. Kipp. 163 pages.
- 115 TRAYNARD, P., and ROBERT, A. A crystalline nitrolignin (Sur une nitrolignin cristallisée). Bulletin de la Association Technique del'Industrie Papetiére 5:7:401-405 (1951).

  Translated by H. Kipp. 10 pages.
- SOBUE, HIROSHI, and others. Chromatographic studies. III. Pentosan in wood cellulose and some pulps for high grade esters. Journal of the Society of the Textile and Cellulose Industry, Japan, 8:79-81 (1952). Translated by Takeo Ogura. 6 pages.
- KOHARA, JIRO. Studies on the durability of wood. I.

  Mechanical properties of old timbers (Horyuji Temple construction timbers, Chamaecyparis obtusa Endlicher).

  Saikyo University, Faculty of Agriculture, Kyoto, Japan, Scientific Reports 2:116-31 (March 1952). Summary, by Gorozo Iizuka. 4 pages.
- PUTKISTO, KALLE. Timber barking and portable barking machines (Puutavaran Kuorinnasta ja siirrettävistä kuorimakoneista). Metsäteho Report (Metsätehon Tiedoituksia) No. 73, Helsinki, 1952. Translated by Teppo Warras. 22 pages.
- SMITH, TORE H. Chromatographic methods and their use in cellulose chemistry (Kromatografiske metoder og deres anvendelse i cellulosekjemien). Bulletin No. 37 of the Norwegian Pulp & Paper Research Institute No. 5 (1951). Translated by H. Kipp. 15 pages.

- ANON. The Hereng method for recovery of hydrochloric acid in the Bergius process of wood hydrolysis (Procédé Bergius. Recuperation de l'acide chlorhydrique. Tropical Technical Forestry Center (Centre Technique Forestier Tropical), Nogent-sur-Marne (Seine), France, January 9, 1953. Translated by H. Kipp. 12 pages.
- SENZYU, RYOITI. A new method of determining lignin in wood and pulp using colloid titration (Eine neue Bestimmungs methode des Lignins in Hölzern und Zellstoffen durch Kolloidtitration). Japan Academy Proceedings 28:6:300-304 (1952). Translated by H. Kipp. 8 pages.
- 129 FESSEL, FRIEDRICH. Centrifugal drying of hardwoods (Hartholztrocknung in der Zentrifuge). Holz als Rohund Werkstoff 10:10:391-394 (October 1952). Translated By H. Kipp. 12 pages.
- STURANY, HERBERT. The Schilde air-free steam drier for wood (Trocknung im reinem Heiszdampf). Holz als Roh- und Werkstoff 10:9:385-362 (Sept. 1952). Translated by H. Kipp. 12 pages.
- LIEBSCHER, WILHEIM. The feed value of pulp, pulp mixed with molasses, and sawdust treated in various ways (Versuche über den Futterwert von Zellulose, melassierter Zellulose und verschieden behandeltem Sagemhl).

  Landwirtschaftliche Jahrebücher 93:306-318 (1943).

  Translated by H. Kipp. 13 pages.
- KIVIMAA, EERO. Dulling of woodworking tools (Was ist die Abstumpfund der Holzbearbeitungswerkzeuge?). Holz als Roh- und Werkstoff 10:11:425-428 (Nov. 1952). Translated by Research Information Service. 11 pages.
- SOCIETE NATIONAL DE CONSTRUCTIONS AERONAUTIQUES DU SUDQUEST, Paris, France. Preparation of metal surfaces for adhesive bonding for aircraft applications (Operations relatives a la preparation au collage des elements a assembler) April 1953. Translated by H. Kipp. 11 pages.

- FESSEL, FRIEDRICH. Turbulence drying of wood, using centrifugal driers, turbulent-air kilns, or butterflydamper adaptations on conventional kilns (Ein Wendepunkt der Trocken-technik durch Zerstörung und Ablösung der Strömungs-Grenzschicht). Reprint from Holz-Zentralblatt No. 11 (Jan. 24, 1953). Translated by H. Kipp. 8 pages.
- FREUDENBERG, KARL, and BITTNER, FRIEDRICH.
  Experiments on coniferyl alcohol containing radioactive carbon (Versuche mit Coniferylalkohol der radioaktiven Kohlenstoff enthält). Chemiche Berichte 86:2:155-159 (1953). Translated by H. Kipp. 6 pages.
- 140 FREUDENBERG, KARL, and HEEL, WERNER. Dihydroxy-and trihydroxy-cinnamic alcohol (Dioxy- und Trioxy-zimtalkohol). Chemische Berichte 86:2:190-196 (1953).

  Translated by B. Ulvestad. 5 pages.
- 141 GRAF, OTTO, and EGNER, KARL. The strength properties of frozen and of repeatedly frozen and thawed timbers (Versuche über die Festigkeitseigenschaften verschiedener Hölzer in gefrorenem Zustand und besonders nach wiederholtem Gefrieren und Auftauen). Mitteilungen des Fachausschusses für Holzfragen beim verein deutscher Ingenieure und deutschen Forstverein, Bulletin 25:18-30 (1940). Translated by H. Kipp. 17 pages.
- 149 FREUDENBERG, KARL and HUBNER, HANS HUGO.
  Hydroxycinnamic alcohols and their dehydrogenation
  polymers (Oxyzimtalkohole und ihre Dehydrierungspolymerisate). Chemische Berichte 85:1181-1191 (1952).
  Translated by H. Kipp. 7 pages.
- JARREAU, FERNAND-RAOUL. Use of supersonic waves to dry wood (Procede de traitement des bois frais). French Patent No. 968,874 dated Dec. 5, 1950. Translated by B. Ulvestad. 5 pages.
- FREUDENBERG, KARL. Method of obtaining soluble, unchanged lignin. (Verfahren zur Gewinnung von löslichem, unverändertem Lignin). German Patent No. 836,351, dated Nov. 5, 1950. Translated by B. Ulvestad. 7 pages.

- JACQUIOT, C. Anomalies of differentiation and lignification of the cambial tissue of various wood species cultivated in vitro (Sur les anomalies de la différenciation et de la lignification du tissu cambial de divers arbres cultives). Papetiére 6:1:13-17 (1952). Translated by H. Kipp. 11 pages.
- MOLLER and PFEIFFER. Kiln for drying wood with superheated steam excluding atmospheric air (Trockenanlage zur Trocknung durch überhitzten Dampf unter Ausschusz der atmosphärischen Lüft). Description of German patent No. 100287 dated Dec. 5, 1897 as contained in German Patent Gazette for Feb. 15, 1899, page 127. Translated by H. Kipp. 3 pages.
- KEYLWERTH, RUDOLF. Practical considerations in purchasing new kilns (Praktische Gesichtspunkte zur Neuanschaffung von Holztrockenanlagen). Holz-Zentralblatt 79:29-32 (April 23, 1953). Translated by Research Information Service. 7 pages.
- ANTOINE, RAYMOND. Methods of sawing wood species of the Belgian Congo. (Comment scier les bois du Congo?).

  Bulletin d'Information de Ineac 1:4:279-286 (Dec. 1952).

  Translated by C. J. Telford. 10 pages.
- 173 KREBS, E. Principles of forest road construction (Grund-satzliches zum Waldstraszenbau). Schweizerische Zeitschrift für das Forstwesen 95:312-319. (1944). Translated by H. Kipp. 10 pages.
- 177 GIERTZ, HANS WILHEIM. The opacity of paper pulps. III.
  Sulfite pulps (Opaciteten hos papersmassor. III.
  Sulfitmassor). Svensk Paperstidning 54:22:769-775 (1951).
  Translated by H. Kipp. 15 pages.
- 178 GIERTZ, HANS WILHELM. The opacity of paper pulps. IV. Sulfate pulps. Svensk Papper stidning 55:3:72-77 (1952). Translated by H. Kipp. 13 pages.
- 179 STAUDINGER, H., and DOHLE, W. Conversion of native to mercerized cellulose (Der Übergang von nativen in mercerisierte Cellulosen) Makromolekulare Chemie 9:2:190-192 (1953). Translated by H. Kipp. 5 pages.

- LANG, HANS. Degree of polymerization and uniformity of wood cellulose (Polymerisationsgrad und Einheitlichkeit von Holzcellulosen). Das Papier 7:3/4:52-56 (1953).

  Translated by H. Kipp. 10 pages.
- JAYME, GEORG and SCHEURING, LUDWIG. Acetate pulps from cereal straw. I. Effect of prehydrolysis, sulfate pulping, bleaching, and extraction (Acetatzellstoffe aus Getreidestroh. I. Einfluss der Vorhydrolyse des Sulfataufschlusses, der Bleiche und Veredlung). Das Papier 7:13/14:223-230 (July 1953). Translated by H. Kipp. 17 pages.
- KAVERZINEVA, E. D. The transformation occuring during oxidation of cellulose (Les transformations chimiques de la cellulose sous l'action des oxydants). (U.S.S.R.) Communications au XIII congres international de chimie pure et appliquee, Stockholm 1953, published Moscow 1953, p. 328-350. (Russian papers for presentation at the XIIIth International Congress of Pure and Applied Chemistry, Stockholm 1953.) Translated by H. Kipp. 23 pages.
- 185 KUBAT, J. The plastic flow of paper (Studien uber das plastische Fliessen von Papier). Svensk Papperstidning 56:17:670-675 (1953). Translated by H. Kipp. 15 pages.
- MOOSMULLER, EDUARD. Rapid method for determining the mineral components of pulps (Schnellmethode zur Ermittlung der mineralischen Bestandteile im Zellstoff).

  Das Papier 6:23/4:523-524 (December 1952). Translated by H. Kipp. 4 pages.
- BARTUNEK, RICHARD and WILLI JANCKE. The structure of native cellulose fibers. Part I. Technical observations and analytical methods in the viscose industry (Untersuchungen uber die Struktur nativer Cellulosefasern. Teil I. Technische Beobachtungen und analytische Methoden aus der Viskoseindustrie). Holz-forschung 7:2/3:71-78 (1953). Translated by H. Kipp. 20 pages.
- ANDERSSON, RUNE. Accuracy of electrical moisture meters (Nogrannheten hos elektriska fuktkvotsmatare). Swedish Forest Products Research Laboratory, Wood Technology Department (Svenska Traforskningsinstitutet, Tratekniska avdelningen), Bulletin 27B, Stockholm 1951. Translated by A. McKee. 26 pages.

- 192 HAGGLUND, SVEN ERIK. High-yield and semichemical pulping processes, especially as observed in the United States (Nagra problem vid tillverkning av pappersmassor i hoga utbyten). Svensk Papperstidning 56:17:651-659 (Sept. 15, 1953). Translated by H. Kipp. 18 pages.
- 199 YAMADA, TADASHI, and SHIGERU KAJITA. Adsorption equation when related to an expanding surface. Kagaku (Science) (Tokyo) 23:6:312-313 (June 1953). Translated from the Japanese by Taizo Inokuma. 6 pages.
- RUNKEL, R. O. H., H. SCHAMBACH, and H. WITT. The effect of temperature in producing soda semichemical hardwood pulps (Uber den Einflusz der Temperatur bei der Herstellung von Halbzellstoffen aus Laubholzern im alkalischen Verfahren). Holzforschung 7:1:9-12 (1953). Translated by H. Kipp. 9 pages.
- KAGI, HEINRICH. Load-elongation curves in textiles, leather, and paper (Die Belastungs-Dehnungs-Kurve, Werkstoffen mit Faserstruktur, Textilien, Leder, Papier). Textil-Rundschau 8:4:168-176 (April 1953) and 8:5:233-242 (May 1953). Translated by H. Kipp. 40 pages.
- THUNELL, BERTIL. Production relationships in the Swedish sawmill industry (Tekniska Produktionsförhållanden inom sågverksindustrien). Swedish Forest Products Research Laboratory, Wood Technology Dept., Stockholm (1953). Translated by L. H. Reineke. 85 pages.
- SWEDEN. CENTRAL ASSOCIATION OF SWEDISH LUMBER DEALERS (SVERIGES TRÄVARUHANDLAREFÖRENINGARS CENTRALFÖRBUND). Swedish standards for fiberboards and wood-wool boards (Träfiberplattor, Träullsplattor, p. 205-208 of Pocket manual for lumber and the building materials industries (Fick-Kalender för Trävaru- och Byggnadsmaterialhandeln). Stockholm, 1951. Translated by B. Ulvestad. 6 pages.
- FREUDENBERG, KARL, and DIETRICH, HEINZ. Synthesis of d.1-pinoresionol and other experiments with lignin (Synthese des d.1-Pinoresinols und andere Versuche im Zusammenhang mit dem Lignin). Chemische Berichte 86:1157-1166 (1953). Translated by B. Ulvestad. 13 pages.

- WANNOW, H. A. Filtrability of viscose (Uber die Filtration der Viskose). Zellwolle, Kunstseide, Seide 29:135-140 (1951). Translated by H. Kipp. 14 pages.
- DANNINGER, ALOIS. Continuous manufacture of pulp (Die kontinuierliche Zellulose-Erzeugung). Wochenblatt für Papierfabrikation 81:13:466, 468 (July 15, 1953). Translated by H. Kipp. 7 pages.
- 210 HÄGGLUND, ERIK. Sulfite cooking with recycling of spent liquor (Sulfitkochung mit Ablaugenzurückführung). Das Papier 7:3/4:41-46 (Feb. 1953). Translated by H. Kipp. 14 pages.
- KLEINERT, THEODOR, and MÖSSMER, VIKTOR.
  Suitability of pulps for viscose production (Über die eignung von Zellstoffen für die viskoseherstellung). Svensk Papperstidning 51:22:541-545 (Nov. 30, 1948). Translated by H. Kipp. 12 pages.
- BERGEK, T., GIERTZ, H. W., HUMBLE, I., JOHNSON, T., and ROSEN, W. Suitability of present laboratory methods and apparatus used in processing and sheet formation and desired characteristics of chemical paper making pulps for certain end used (Önskvarda egenskaper hos kemiska massa för papperstillverkning och metoder för deras karakterisering). Svensk Papperstidning 51:4:95-103 (Feb. 29, 1948). Translated by H. Kipp. 16 pages.
- TSCHAMLER, H., KRATZL, K., LEUTNER, STEININGER, A., and KISSER, J. Infrared spectra of microscopic sections of wood and of several model substances (Die Ultrarotspektren mikro-skopischer Holzschnitte und einiger Modellsubstanzen). Mikroskopie 8:7/8:238-246 (1953). Translated by Research Information Service. 13 pages.
- APEL, ALFONS, and RÖSSLER, GEORG. Process for deacidification and purification of wood sugar solutions (Verfahren zur Entsäuerung und Reinigung von Holzzucherlösungen). German Patent No. 845, 780 dated Jan. 26, 1953. Translated by Research Information Service. 5 pages.

- FAHLBUSCH, HEINZ. A contribution to the problem of the bearing strength of bolts in wood under static loads (Ein Beitrag zur Frage der Tragfähigkeit von Bolzen in Holz bei statischer Belastung). Report from the Institute for Mechanical Construction and Carpentry. Report No. 49-09 (1949). Translated by Research Information Service. 109 P.
- 219 KOLLMAN, FRANZ. Wood preservation in Sweden (Holzschutz in Schweden). Holz-Zentralblatt 76:88:963-966 (July 25, 1950). Translated by A. McKee. 22 pages.
- LEDINOT, E. Cutting veneer on the rotary lathe (Le materiél pour la fabrication du placage et du contreplaqué).

  Revue du bois 8:12:13-18 (Dec. 1953). Translated by Research Information Service. 18 pages.
- WOLF, SIEGFRIED. Methods of producing furfuralas shown in the patent literature 1913-1951 (Methoden der furfurol-gewinnung). Faserforschung und Testiltechnik 4:5:199-212 (1953). Translated by H. Kipp. 38 pages.
- GIERTZ, HANS WILHELM. The basic differences between sulfite and sulfate pulps (En jamförelse mellan sulfit- och sulfatmassa). Svensk Pappérstidning 56:23:893-899 (Dec. 15, 1953). Translated by H. Kipp. 13 pages.
- JAYME, GEORG, and BRANSCHEID, FRIEDRICH. A simple color reaction for identification of wet strength papers occurring in waste paper intended for reprocessing (Eine einfache Farbereaktion zur Identifizierung von mit Aminoplasten nassfest gemachten Papieren). Das Papier 8:3/4:43-48 (Feb. 1954). Translated by H. Kipp. 15 pages.
- JOHANSSON, AXEL. Analysis of acetylation reagents (Analys av acetyleringsreagens). Svensk Papperstidning 50:22:527-529 (Nov. 30, 1947). Translated by H. Kipp. 5 pages.
- KLINGELHÖFFER, HANS. The scoring of paperboard (Zur Technologie des Ritzens von Pappe). Allgemeine Papier-Rundschau 125:5:208-211 (1953). Translated By H. Kipp. 10 pages.

- ANONYMOUS. A satisfactory arrangement for regulating pulp consistency (Der Regler in der Praxis). Wochenblatt für Papierfabrikation 81:4:117-119 (Feb. 28, 1953).

  Translated by H. Kipp. 6 pages.
- ANTOINE, RAYMOND. Bandsaw action and specific work in cutting of wood (Le débit des bois á la scie á ruban.

  Etude du travail specifique á l'outil). Bulletin d'Information de Ineac 2:6:295-440 (Dec. 1953). Translated by C. J. Telford. 52 pages.
- SIMON, ARTHUR, and BAUMGAERTEL, EBERHART.
  Interfacial properties of sodium pentachlorophenolate and
  their influence on the stability of aqueous salt-oil pastes
  (Summary only) (Die grenzflächenaktiven Eigenschaften
  des Natriumpentachlorphenolats und sein Einfluss auf
  den Gütezustand wasserhaltiger (Salz = Oel-Pasten). Holz
  als Roh- und Werkstoff 11:10:377-382 (Oct. 1953). Translated
  by B. Ulvestad. (Revision of Translation No. 232 dated
  May 1954). 2 pages.
- 236 ISHIKAWA, HISAO. Lignin. XI. Molecular weight distribution of lignin. Japanese Forestry Society Journal 35:12:396-405 (1953). Translated by Y. Shimazu. 21 pages.
- ANONYMOUS. Electrical apparatus for determination of wood moisture content (Elektrogeraete zur Bestimmung der Holzfeuchtigkeit). Holztechnik 33:9:330-332 (1953).

  Translated by Research Information Service. 8 pages.
- OGAIT, ALFRED. Yield problems in the manufacture of sulfite pulp (Ausbeutefragen bein der Herstellung von Sulfitzellstoff). Das Papier 7:23-24:471-478 (Dec. 1953). Translated by H. Kipp. 18 pages.
- HAUSCHILD, WALTER. Performance of thin-layer evaporators with compulsorily developed films (Leistung von Dünnschicht-verdampfern mit zwangsläufig ausgebildeten Filmen). Chemie-Ingenieur-Technik 25:573-574 (1953). Translated by B. E. Ulvestad. 7 pages.

- THUNELL, BERTIL. Wood utilization in the sawmill industry (Sagverksindustrins Virkesutnyttjning). Swedish Forest Products Research Laboratory, Wood Technology Dept. Bulletin 32B (1952). Translated by E. E. and L. H. Reineke. 40 pages.
- ULMANN, M. The chromatography of soluble starch (Zur Chromatographie der löslichen Stärke). Kolloid-Zeitschrift 116:1:10-18 (1950). Translated by H. Kipp. 16 pages.
- ULMANN, M. Changes of phase in dilute starch solutions.

  1. Chromatographic investigations (Über Zustandsanderungen in verdünnten Stärkelösungen). Kolloid-Zeitschrift 123: 2/3:105-113 (1951). Translated by H. Kipp. 15 pages.
- KEYLWERTH, R., and H. KUBLER. Maximum operating temperatures and corresponding surface and interior temperatures in thin softwood lumber during drying (Hochstmögliche Temperaturen und Verlauf der Holztemperaturen bei der Nadelschnittholztrocknung). Deutsche Holzwirtschaft 8:6:1-2 (Jan. 16, 1954). Translated by B. E. Ulvestad. 10 pages.
- CORNELY, B. Ultrasan, a substance fluorescent in the ultraviolet range, as a whitening agent for paper (Uber eine neue Methode des Weissfärbens). Zellstoff und Papier 21: 5:158 (May 1941). Translated by H. Kipp. 10 pages.
- KEYIWERTH, RUDOLF. Qualitative analysis of growth in Douglas-fir (Ein Beitrag zur qualitativen Zuwachsanalyse). Holz als Roh- und Werkstoff 12:3:77-83 (March 1954). Translated by A. McKee. 20 pages.
- 250 CENTOLA, GERMANO, and PRATI, GIOVANNI.

  Determination of the insoluble fraction of cellulose
  (Determinazione della frazione di cellulosa insolubile).

  Industria carta (Milan) 5:25-27 (1951). Translated by
  H. Kipp. 10 pages.
- NOREN, BENGT. The joint--The weak point in spring roof trusses (Förbandet--Den Svaga Punkten Hos Vára Takstolar).

  Bulletin 17B of Swedish Forest Products Research Laboratory, Stockholm 1951. Translated by L. H. Reineke. 17 pages.

- SKJELMERUD, HALVOR. Rapid drying of green sawdust (Hurtigtörkning Av Rå Sagflis), Tech. Note No. 3
  Norwegian Institute of Wood Technology, Blindern,
  Norway (March 1953). Translated by L. H. Reineke.
  7 pages.
- KRPAN, J. Investigation of the fiber saturation point of beech, oak, fir, and spruces (Untersuchungen über den Fasersattigungspunkt des Buchen-, Eichen-, Tannen- und Fichtenholzes). Holz als Roh- und Werkstoff 12:3:84-91 (March 1954). Translated by A. McKee. 24 pages.
- 258 HVAMB, G. H. Gullets, feed, and cutting velocity of circular sawblades (Tannluker, matning, or skjaerehastighet ved sirkelsabblad) Smaskrift Nr. 2, Norsk Treteknisk Institutt (March 1953). Translated by L. H. Reineke. 14 pages.
- GOTTSCHEWSKI, G. H. M. The methods of fluorescence and ultraviolet-microscopy and the importance of spectroscopy in cell research (Die Methoden der Fluoreszenz-und Ultraviolet-Mikroskopie und Spektroskopie in ihrer Bedeutung für die Zellforschung). Mikroskopie 9:5-6: 147-167. Translated by A. McKee. 27 pages.
- SADLER, HANS, BELLAK, FRITZ, and RÖDER, HERBERT.
  Comparative heating value of sulfite and sulfate spent
  liquors (Vergleichende Heizwertuntersuchungen von
  sulfit-und sulfatablaugen). Das Papier 7:21-22:416-424
  (Nov. 1953). Translated by H. Kipp. 24 pages.
- ENGELMANN, E. The differing behavior of cotton linters and wood pulps in acetylation (Das verschiedene Verhalten von Baumwoll-Linters und Holzzellstoffen bei der Acetylierung). Das Papier 5:9:149-155 (May 1951). Translated by H. Kipp. 14 pages.
- VORREITER, LEOPOLD. Tree form and wood properties of Bavarian spruce (Stammform und Holzeigenschaften der Bayernwald-Fichte). Holz als Roh- und Werkstoff 12:2:47-54 (Feb. 1954). Translated by Research Information Service. 26 pages.

- HENNIG, ROF. Weight per unit volume and its determination for small wood specimens (Uber das Raumgewicht und seine Bestimmung bei kleinen Holzproben). Weltholzwirtschaft 3:3:57-58 (1951). Translated by Charlotte Hiller. 7 pages.
- NORWAY, Wood construction--Rules for calculating, construction, and application (Trekonstruksjoner--Regler for beregning, konstruksjon og utførelse). Partial translation (pages 8 to 23) of Edition II of NS 446. (September 1953). Translated by Research Information Service. 18 pages.
- KEYLWERTH, RUDOLF. The accuracy of quantitative growth analysis (Die Genauigkeit quantitativer Zuwachsanalysen). Holz als Roh- und Werkstoff 12:2:41-44 (Feb. 1954). Translated by Research Information Service. 11 pages.
- RENNERFELT, ERIK. Testing the effectiveness of wood preservatives on fungi with various laboratory methods (Prüfung der pilzwidrigen Wirksamkeit von Holzschutzmitteln mit verschiedenen Laboratoriumsverfahren). Holz als Roh- und Werkstoff, Aug. 1954, pp. 304-306. Translated by Research Information Service. 10 pages.
- LEDINOT, E. Equipment for the manufacture of veneer and plywood: Its construction and rational use--Horizontal slicers (Le materiél pour la fabrication du placage et du contreplaqué: Sa construction--Son utilisation rationnelle--Trancheuses horizontales). Revue du Bois et du ses Applications: IX (11): 13-16 (Nov. 1954). Translated by Research Information Service. 13 pages.
- HILDEBRANDT, GERD. Investigations of spruce stands in regard to growth and yield of pure wood substance (untersuchungen an Fichtenbeständen über Zuwachs und Ertrag reiner Holzsubstanz). 137 pages. Berlin 1941. Partial translation by H. Kipp. 10 pages.
- GIERER, J. Reaction of quinone monochlorimide with lignin.

  I. Specificity of reaction to p-hydroxybenzyl alcohol groups and determination of the latter in various lignin preparations (Die Reaktion von Chinonmonochlorimid mit Lignin. I. Spezifität der Reaktion auf p-Oxybenzylalkohol-gruppen und deren Bestimmung in verschiedenen Ligninprä-paraten).

  Acta Chemica Scandinavica 8:1319-1331 (1954). Translated by the Research Information Service. 18 pages.

- 281 RITTER, E. J. Moulded components from wood particles (Das Spanholz-Formteil). Holz-zentralblatt 80:69:841-843, June 12, 1954. Translated by Research Information Service. 16 pages.
- OGLAND, N. J. Importance of hemicellulose and lignin in the manufacture of hard fiber boards (Hemicellulosans och ligninets roll vid framstalling ar harda träfiberskivor).

  Svensk Papperstidning 58:2:50, Jan. 31, 1955. Translated by A. McKee. 7 pages.
- ENGLESSON, TORSTEN; HVAMB, GULLIK; and THUNELL, BERTIL. Some results form "counter" and "climb" ripsawing investigations (Noen resultator fra undersökelser over saging med och mot fibrene). Bul. No. 7 of Norsk Treteknisk Institutt, Oslo, 1954; also Bul. No. 53B of Svenska Träforskning institutet, Stockholm, 1954. Translated by L. H. Reineke. 20 pages.
- EICKE, RUTH. A contribution to the structure of the bordered pit in conifers (Beitrag zur Frage des Hoftüpfelbaues der Koniferen). Berichte der Deutschen Botanischen Gesellschaft, August 1954, pp. 213-217. Translated by C. Hiller. 9 pages.
- FICKLER, HANS-HEINRICH. Influence of bending speed and support distance on determination of bending strength in fiberboards, plywood, and chipboards (Nedböjningshastighetens och stödavståndets inverkan vid bestämning av böjhállfastheten hos fiberplattor, plywood och spånskivor).

  Svenskpapperstidning, Feb. 28, 1955, pp. 107-112.

  Translated by A. McKee. 17 pages.
- THUNELL, BERTIL. Outcome of some sorting tests and the importance of quality-determining factors (Virkesutbytet vid Några Provsorteringar samt Bertydelsen av de Kvalitets-bestammande Faktorerna Härvid). Svenska Tranforskningsin-stitutet Träteknik, Meddlelande 56B, Stockholm, (1954). Translated by Research Information Service. 49 pages.
- WEBER, OSKAR H. Determination of carboxylic groups in cellulose by means of the "reversible methylene blue method" (Carboxylbestimmung in Cellulosen nach der "Reversibel-Methylenblau-Methode.") Das Papier 9:1/2: 16-18 (Jan. 1955). Translated by A. McKee. 7 pages.

- HIPP, KARL and SCHÖNBORN, HANS-HELLMUTH.
  Inertia-free measurement of cutting energy in machining wood. (Trägheits-freie Schnittkraftmessung beim Holzfräsen). Holz als Roh- und Werkstoff, (Jan. 1955).
  Pages 21-23. Translated by Research Information Service. 8 pages.
- STRIKHA, I. A. Causes of deformation of wood. Details and methods of reducing it (Priciny Deformacii Detalei Izdrecesiny i Sposoby Umenjsenija). Nauka i Tekhnika, No. 7, pages 7-11. Translated by Research Information Service. 14 pages.
- KEYLWERTH, R., GAISER, HELMUT, and MEICHSNER, HERBERT. Experiments in a superheated steam kiln (Untersuchungen an einer Heissdampftrockenanlage). Holz als Roh- und Werkstoff 13:1:5-20 (Jan. 1955). Translated by Research Information Service. 35 pages.
- KEYLWERTH, RUDOLF. Statistical methods in wood testing (Statistik bei der Holzprufung). Holz als Roh- und Werkstoff 13:5:169-178 (May 1955). Translated by Research Information Service. 23 pages.
- WISLICENUS, H. Change in color of wood by the action of gases and vapors for technological improvement. Zeitschrift für Angewandte Chemie 23:1441-1446 (1910). Translated By F. L. Browne. 12 pages.
- KOLLMAN, F., and NARAYANAMURTI, D. Studies of the plasticization of wood. First report: Behavior of several native species of wood in the wet condition in a high-frequency alternating field. (Studien über die Plastifizierung von Holz. Erste Mitteilung: Verhalten einiger indischer Holzarten im feuchten Zustand im hochfrequenten Wechselfeld). Holz als Roh- und Werkstoff 13:3:91-94 (March 1955). Translated by R. L. Youngs. 11 pages.
- SCHULZ, H. The fundamentals of veneer evaluation, using oak as an example. (Grundlagen der Furnierholzbewertung am Beispiel der Eiche). Holz-Zentralblatt 81:62:759-760 (May 24, 1955). Translated by Research Information Service. 13 pages.

- KOHARA, JIRO. Studies on the durability of wood--VI.
  The change of mechanical properties of old timbers.
  Scientific Reports of Saikyo University, Kyoto 6:164-174
  (1954). Translated by Research Information Service.
  19 pages.
- BUSER, K. Is the moisture-swelling of rust-preventive paints a measure for evaluating their quality? (Ist die Wasserquellung von Rostschutzfarben ein Massstab zur Beurteilung ihrer Qualität?). Deutsche Farben-Zeitschrift 8:12:471-472 (1954). Translated by F. L. Browne. 4 pages.
- D'ANS, J. Research on technical paints, particularly on film swelling (Über anstrichtechnische Forschung insbesondere über die der Filmquellung). Farbe und Lack 61:2:54-59 (1955). Translated by F. L. Browne. 14 pages.
- OGURA, TAKEO, and OHNUMA, KAMOYA. The experimental formula for the evaporation rate of moisture in wood at the constant drying period. Japanese Government Forest Experiment Station. Translated by Research Information Service. In Journal of Wood Research Society of Japan 1:1:38-41 (1955). 12 pages.
- ABADIE-MAUMERT, F. A. Changes in pure cellulose by light (Alterations de la Cellulose pure par la Lumiere).

  La Papeterie 77: 593, 595, 597, 599 (1955). Translated by F. L. Browne. 12 pages.
- TRAYNARD, P. and EYMERY, A. Delignification of wood by hydrotropic solutions. <u>I</u>--Mechanism of delignification (Delignification des Vegetaux par les Solutions Hydrotropiques. I--Mecanisme de la delignification). Holzforschung 9:6:172-177 (1955). Translated by Research Information Service. 17 pages.
- KÜCH, WILHELM. Interaction between the preservative treatment of wood and gluing (Über die Wechselwirkung zwischen Holzschutzbehandlung und Verleimung). Holz als Roh- und Werkstoff 14:2:58-67 (February 1956). Translated by Research Information Service. 25 pages.

- MÖHLER, KARL. Some rudiments and developmental possibilities of nailed wood construction (Über einige Grundlagen und Entwicklungs-möglichkeiten des Holznagelbaues). Holz als Roh- und Werkstoff 13:10:388-397 (October 1955). Translated by Research Information Service. 20 pages.
- 310 SCHURZ, J. Ultraviolet absorption of cellulose (Zur UV-Absorption der Cellulose). Svensk Papperstidning 59:3:98-103 (Feb. 15, 1956). Translated by F. L. Browne. 12 pages.
- FABRE, G. The permeability of plastics. Industrie des plastiques modernes 7:4:33-35; 7:5:41-43; 7:6:35-38 (1955). Translated by F. L. Browne. 29 pages.
- TRAYNARD, P. and EYMERY, A. Delignification of wood by hydrotropic solutions. II --Study of the hydrotropics of lignin (Delignification par les Solutions Hydrotropiques. II--Etude des lignines hydrotropiques). Holzforschung 10:1:6-11 (1956). Translated by Research Information Service. 16 pages.
- WEINMANN, KURT. Permeability to water vapor of varnish films and synthetic foils and its relations to swelling and stability to dampness (Die Wasserdampfdurchlässigkeit von Lackfilmen bzw. Kunststoffolien und ihr Zusammenhang mit der Quellung und Feuchtraumbeständigkeit). Fabre und Lack 61:315-323 (1955). Translated by F. L. Browne. 22 pages.
- TRAYNARD, P. and EYMERY, A. Delignification of wood by hydrotropic solution. III --Hydrotropic lignins and the taxonomy of the plants from which they have been extracted. (Delignification par les Solutions Hydrotropiques. III-- Lignines Hydrotropiques et Taxonomie des Vegetaux dont elles ont ete Extraites). Holzforschung 10:2:43-45 (1956). Translated by Research Information Service. 11 pages.
- JAYME, GEORG, and TIEDTKE, KARL HEINZ.

  Quantitative Paper-Chromatographic Determinations of
  Polysaccharide Hydrolysis through Indirect Photometry
  (Quantitative papierchromatographische Bestimmung von
  Polysaccharid-Hydrolysaten durch indirekte Photometrie).
  Das Papier 10:9/10:190-192 (May 1956). Translated by
  Research Information Service. 7 pages.

- 316 BOLLMANN, LUDWIG. Accelerated air drying (Beschleunigte Freilufttrocknung). Holz-Zentralblatt 98:1173-1174 (August 1955). Translated by Research Information Service. 6 pages.
- VORREITER, LEOPOLD. Calculation of cell wall density from wood constituents (Rechnungsmässige Bestimmung der Zellwand-dichte aus den Holzkonstituenten). Hols als Roh- und Werkstoff 13:5:185-188 (May 1955). Translated by C. H. Hiller. 10 pages.
- 318 YLINEN, ARVO. Relationships between percentage of summerwood, dry wieght, and the elastic constants in wood with distinct annual rings (Über die Beziehungen zwischen Spätholz-anteil, Rohwichte und den elastischen Konstanten bei Holz mit ausgepragtem Jahrringbau). Holz als Rohund Werkstoff 14:6:205-207 (June 1956). Translated by Research Information Service. 9 pages.
- RICK, ANTON W. Formation of blisters in coatings (Zur Blasenbildung in Anstrichstoffen). Deutsche Farben-Zeitschrift 10:4:122-125 (1956). Translated by F. L. Browne. 9 pages.
- RICK, ANTON W. The breathing ability of coatings (Atmungsfähigkeit von Anstricken). Deutsche Farben-Zeitschrift 10:1:15-16 (1956). Translated by F. L. Browne. 3 pages.
- D'ANS, ANNA MARIA, and SCHULZE, BRUNO. Electron-microscopical investigations of impregnated woods (Elektronen-mikroskopische Untersuchungen an imprägnierten Hölzern). Holz als Roh- und Werkstoff 14:7:252-256 (July 1956). Translated by Research Information Service. 13 pages.
- NOWAK, ALFRED. Investigations of the fungicidal action of isolated constituents of various coal tar oils (Untersuchungen über die fungizide Wirkung einzelner Bestandteile verschiedener Steinkohlenteerole). Holz als Roh- und Werkstoff 14:7:268-270 (July 1956). Translated by Research Information Service. 11 pages.

- SUBIYAMA, HIDEO. Effect of loading time on the bending strength and stiffness of wood. Report issued by Meiji University, Japan. Translated by Research Information Service. 31 pages.
- BUCHHOLZ, DR. E. The drying of beech wood with petrolatum in the Soviet Union. (Trocknung von Buchenholz mit Petrolatum in der Sowjetunion). Holz-Zentralblatt 82:73:923 (June 19, 1956). Translated by Mrs. Eleanor K. Arena. 5 pages.
- SCHULZ, W. O. and SIPPEL, E. The modifiability of the fixation of U-salts and UA-salts in wood through the addition of acid (Analytical studies of leaching liquors) (Uber die beeinflussbarkeit der im Holz vor sich geheden Fixierung von U- and UA-Salzen durch Säurezusätze) (Analytische Untersuchengen von Auslaugwässern). Holz als Roh- und Werkstoff 14:7:257-267. (July 1956). Translated by Research Information Service. 32 pages.
- HVAMB, GULLIK. Sawing precision at important types of Norwegian sawmills. Results from recorded measurements. (Skurnyaktigheten ved vare viktigste sagbrukstyper. Resultater fra malinger med skrivende instrument). Bulletin No. 8, Norsk Treteknisk Institutt, Blindern, Oslo, Norway. April 1956. Translated by L. H. Reineke. 26 pages.
- SAMSET, IVAR. Yarding with the double-drum forest winch. (Om Lunning med To-tromlet skogbruksvinsj). Skogeieren 42:2:36 (Feb. 15, 1955). Translated by L. H. Reineke. 40 pages.
- 329 EGNER, KARL. Technological principles of the trianglestrut construction (Technologische Grundlagen der Dreieck-Streben-Bauweise). Holz-Zentralblatt 11:26 (January 1954). Translated by Research Information Service. 17 pages.
- KEYLWERTH, RUDOLF. Dimensional stability and uniformity of furniture and door panels (Dimensions stabilität und Gleichmässigkeit von Mobel- und Türplatten). Holz als Roh- und Werkstoff 14:9:353-360 (Sept. 1956). Translated by Research Information Service. 26 pages.

- MOLOTKOV, P. L. Sap movement in the water-conducting system of trees and inter-connections between root grafted trees. (Podviznostj pasoki v vodoprovdjascei sisteme dereva i soobscaemostj mezdu derevjjami). Botanicheskii zhurnal (U.S.S.R.) 41:3:407-409 (1956). Translated by Dimitri Pronin. 5 pages.
- HUHRJANSKAJA, T. P. Effect of compression on the wood structure of aspen and pine (Vlijanie pressovanija na struk. drevesiny osiny i sosny). Works of the Forestry Institute 9:444-447 (1953). The Academy of Sciences of the USSR. Translated by Dimitri Pronin. 10 pages.
- BURO, ANDREAS, and BECKER, GÜNTHER. Influence of water content, characteristics, and changes of softwood on the diffusion of natrium fluoride in the cell wall (Der Einfluss von Wassergehalt, Eigenschaften und Veränderungen von Nadel-hölzern auf die Diffusion von Natrium fluorid in der Zellwand). Holz als Roh- und Werkstoff 14:10:388-403 (October 1956). Translated by Research Information Service. 39 pages.
- RUNKEL, R. O. H. and LÜTHGENS, MANFRED. Studies of the sorption of the wood fiber--Part II. Investigations of the heterogeneity of water sorption of the chemical and morphological components of lignified cell walls (Untersuchungen über die Heterogenität der Wassersorption der chemischen und morphologischen Komponenten verholzter Zellwände). Holz als Roh- und Werkstoff 14:11:424-441 (November 1956). Translated by Research Information Service. 48 pages.
- SANDERMANN, WILHELM, and ECKHARD SCHWARZ.

  Effect of wood extractives on the resistance of weathering and the drying of oil- and polyester varnishes (Über den Einfluss von Holzinhaltsstoffen auf die Witterungsbeständigkeit und die Trocknung von Öl- und Polyesterlacken). Farbe und Lack 62:4:134-144 (1956). Translated by F. L. Browne. 24 pages.
- HAYASHI, AKIRA, and TACHI, ISAMU. Studies on the chemical combination between lignin and carbohydrate.

  Part I: Relation between wheat straw lignin and pentosan upon alkali extraction. Dept. of Agr. Chem., Faculty of Agriculture, Kyoto University, Japan. Translated by Research Information Service. 21 pages.

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- CANTIANI, DOTT. MARIO. Experiments in charcoal production from the woods of oak and beech (Ricerche sperimentali sulla carbonizzazione della legna di cerro e di faggio). L'Italia Forestale e Montana. p. 125-129. Translated by Research Information Service. 9 pages.
- GRATZL, A. Measuring technique in testing the stability of flat bodies (Zur Messemethodik bei der Prüfung des Stehvermögens plattenförmiger Körper). Internationaler Holzmarkt 8:5:13-16 (Nov. 1956). Translated by Research Information Service. 11 pages.
- KABURAGI, ZISUKE. Forest-Biological Studies on the Quality of Wood--Report 1. June 1958. Translated from the Japanese by Research Information Service. 39 pages.
- BERGER, HARRY. The effect of kind and quantity of pigments on the permeability of paint films (Untersuchungen über den Einfluss der Art und Menge von Pigmenten auf die Durchlässigkeit von Anstrichfilmen). Deutsche Farben-Zeitschrift 6:10:211-215 and 7:10:243-251 (1956). Translated by F. L. Browne. 42 pages.
- PRAGST, W. Report of a study of the question of the moisture retarding action of paints (Bericht über einige Versuche zur Frage der feuchtigkeitshemmenden Wirkung von Anstrichstoffen). Farbe und Lack 62:4:145-149 (1956) and letters of comment by B. R. Pasch, Farbe und Lack 62:7:336-337 (1956) and F. M. Albert, Farbe und Lack 62:7:337-338 (1956). Translated by F. L. Browne. 17 pages.
- BRECHT, WALTER, and WEISS, HERMANN. Chemigrinding with addition of chemicals during grinding (Chemisches Schleifen durch Chemikalinenzugabe zum Schleifprozess).

  Das Papier 11:5/6:82-89 (March 1957). Translated by Research Information Service. 15 pages.
- JAYME, GEORG, and HUNGER, GUNTHER. Electronoptical study of the fiber-to-fiber bond in the paper sheet
  structure (Die Faser-zu-Faser-Bindung des Papierblattgefüges
  im elektronenoptischen Bild). Das Papier 11:7/8 (April 1957).
  Translated by Research Information Service. 11 pages.

- KOLLMANN F. Differences in the rheological behavior of wood and wood materials under compression perpendicular to the grain (Uber Unterschiede im rheologischen Verhalten von Holz und Holzwerkstoffen bei Querdruckbelastung). Reprint Forsch. Ing.-Wes. No. 23, 1957. Translated by Research Information Service. 13 pages.
- 350 CHARDIN, A. The study of sawing by ultra-rapid photography (L'Etude du Sciage par Photographie Ultra-Rapide). Rev. Bois et Forêts des Tropiques No. 51 (Jan.-Feb. 1957). Translated by J. Kryn. 24 pages.
- 351 HATA, KATSUMI, and SOGO, MURAO. Chemical studies on the bark (II). Extractives, especially wax, from the outer bark of Japanese red pine. Journal of the Japanese Forestry Society 39:3:102-106 (1957). Translated by Research Information Service. 15 pages.
- GONET, BOLESLAW. Analysis of formulae for the maximum water content of wood (Analiza wzorow na nasiakliowose drewna). Sylwan 100A:3:52-59 (1958). Translated by Dimitri Pronin. 10 pages.
- POUZEAU, P. and PRADAL, H. New developments in okoume peeling (Aspects Nouveau dans la Technique du Deroulage de l'Okoumé). Revue Bois et Forêts des Tropiques 54:41-50 (July-August 1957). Translated by Research Information Service. 19 pages.
- MAKU, TAKAMARO, SASAKI, HIKARU, and HAMADA, RYOZO. Effect of paraffin waterproofing agents on water absorption, hygroscopic properties, and bending strength of chipboard. Journal of Japan Wood Research Society 2:3: 130-132 (June 1956). Translated by Research Information Service. 6 pages.
- KITAHARA, KAKUICHI, and KASAGI, KAZUO. Effects of chip dimensions on the properties of chipboard. Wood Industry 10:8:406-412, published by Wood Technological Association of Japan, 1955. Translated by Research Information Service. 15 pages.
- MARIAN, J. E. What can the paint technician learn from adhesion research? (Vad kan målningsteknikern lära av adhesionsforskningen?) Tidskrift fur färg öch lack. 2: 4:99-106 (1956). Translated by Research Information Service. 10 pages.

- GILLET, ALF. and URLINGS, J. Pyrolysis of wood in palm oil (Pyrolyse du Bois dans l'Huile de Palms).

  Chemie and Industrie 69:2:252-257 (February 1953).

  Translated by F. L. Browne. 9 pages.
- 358 KLASON, PETER, von HEIDENSTAM, GUST., and NORLIN, EVERT. Studies of wood carbonization. I. The dry distillation of cellulose (Zeitschrift für angewandte Chemie 22:25:1205-1214 (1909). Translated by F. L. Browne. 18 pages.
- BURO, ANDREAS. Contribution to the testing for oily preservatives in wood (Beitrag zum Nachweis von oligen Schutzmitteln im Holz). Holz als Roh- und Werkstoff 15: 437-443 (October 1957). Translated by Research Information Service. 17 pages.
- MOSCALEVA, V. E. The swelling of microsections of natural and pressed wood of pine in liquids of different polarity. Academie of Sciences, U.S.S.R., Transactions of the Wood Institute, Vol. IX, pp. 121-126 (Moscow 1953). Translated by Dimitri Pronin. 9 pages.
- ZIEGER, ERIC. Wood quality and site (Rohholzqualität und Standort). Holz-Zentralblatt, No. 93, pp. 1147 and 1148 (Aug. 3, 1957). Translated by Dimitri Pronin. 14 pages.
- PERVUHIN, V. and LOSHMANOV, I. The transportation of trees with crowns in Kakmozh Forest Enterprise.

  Lesnaya Promyshlennost (Forest Industry) No. 11, page 15 (1957). Translated by Dimitri Pronin. 2 pages.
- GÖHRE, KURT. Experiments on impregnation of pine heartwood with tar oil (Versuche zur Imprägnierung von Kiefernkernholz mit Teeröl). Holz als Roh- und Werkstoff 16:1:22-27 (1958). Translated by Research Information Service. 18 pages.
- KÜBLER, HANS. Studies on the movement of moisture through wood (Studien über die Holzfeuchtebewegung). Holz als Roh- und Werkstoff 15:11:453-468 (Nov. 1957).

  Translated by the Research Information Service. 53 pages.

- CHARDIN, A. Use of the dynamometric pendulum in research on the sawing of wood (Utilisation du Pendule Dynamonetrique dans les Recherces sur le Sciage des Bois). Revue Bois et Forêts des Tropiques No. 58, pp. 49-61 (March-April 1958). Translated by E. E. Reineke and L. H. Reineke. 33 pages.
- LUNDGREN, AKE. The hygroscopic properties of fiberboards (Die hygroskopischen Eigenschaften von Holzfaserplatten). Holz als Roh- und Werkstoff 16:4:122-127 (April 1958). Translated by Research Information Service. 14 pages.
- VAN OETEREN-PANHAUSER, K. A. The swelling of (paint) coatings. Deutsche Farben-Zeitschrift 12:2:63-64 (1958). Translated by F. L. Browne. 5 pages.
- 369 GRATZL, A. Report on the fourth international wood technology conference of the FAO (April 22 to May 2, 1958). (Bericht über die IV. Internationale Holztechnologie-Konferenz der FAO 22. April 2. Mai, 1958). Translated by the Research Information Service. 10 pages.
- MIURA, IHACHIRO. Researches on tropical woods for the manufacture of pulp. I. Chemical composition of Philippine woods (Davao). Tokyo Imperial University, Hongo, Tokyo. Chemical Industry (Tokyo) 13:11:B76-78 (Oct. 1937); BIPC 8:172. Translated by Charles A. Meyer and Company, Inc. 10 pages.
- 371 SCHURZ, J. and KIENZL, E. Light damage to disaccharides in the presence of TiO2-pigment. (Die Lichtschädigung von Disacchariden in Gegenwart von TiO2-Pigment).

  Svensk Papperstidning 61:19:844-850 (Oct. 15, 1958).

  Translated by F. L. Browne. 15 pages.
- GRANLUND, PER. Investigations of methods for drying green sawdust. (Undersøkelser over metoder for tørking av rå sagflis.) Norsk Skogindustri 12:11:411-418 (Nov. 1958). Translated by L. H. Reineke. 24 pages.
- IVANOV, Yu. M. The question of interaction between wood and moisture. Forest Institute, Vol. XXXVII, pp. 245-253. Academy of Sciences of USSR, Moscow. Published by Gosizdat, 1958. Translated by Dimitri Pronin. 13 pages.

- IABLOKOFF, A.-KH. Influence of ecological factors on the structure and mechanical properties of wood. (Action des facteurs ecologiques sur la structure et les propriétés mécaniques du bois d'EPICEA (Picea excelsa Link.).

  Tome XIV, Fascicule 2, pp. 277-316, 1955). Translated by Benson H. Paul. 35 pages.
- GRATZL, A. Report on the Fourth International Wood Technology Conference of the FAO (April 22-May 2, 1958) (continuation 1). (Bericht über die IV. Internationale Holztechnologie-Konferenz der FAO (22. April 2, Mai 1958). Holzforschung und Holzverwertung 10:6:97-99. 1958. Translated by Charlotte Hiller. 7 pages.
- VON PECHMANN, H. The effect of growth rate on the wood structure and wood properties of some tree species. (Die Auswirkung der Wuchsgeschwindigkeit auf die Holzstruktur und die Holzeigenschaften einiger Baumarten). Schweizerische Zeitschrift für Forstwesen Journal Forestier Suisse 109:11:615-647 (November 1958). Translated by Dimitri Pronin. 29 pages.
- TUOMINEN, MARTTI. Sea water in sulfate pulp production (Merivesi Sulfaattiselluloosan Valmistuksessa). Lecture delivered by Ing. Martti Tuominen at the Autumn Meeting of Suomen Paperi-insinöörien Yhdistys (Finnish Paper Engineers' Association) on November 23, 1940. Translated from the Finnish by Research Information Service. 10 pages.
- GOHRE, KURT. The distribution of the specific gravity in the stem and the influence of region of growth and locality on the specific gravity of wood. Institute of Physical Wood Technology, Eberswalde. Translated by Dimitri Pronin. September 1959. 36 pages.
- PARDE, J. Wood production and Paterson's index.
  Schweizerische Zeitschrift für Forstwesen Journal
  forestier suisse 110. Jahrgang, Nummer 4, April 1959.
  Translated by B. H. Paul. 13 pages.
- TYSHKEVICH, G. L. Physiomechanical properties of spruce wood in the Carpathian Mountains and the effect of various types of branching on these properties. Forest Technology Institute at Lvov from University News, Forest Journal, 1958. Translated by Dimitri Pronin. 6 pages.

- MINORU, S., RYOSABURO, Y., SHIRUKO, I., KOICHI, K. Strength test for structural timber 1. Spruce and hemlock grown in Alaska. Feb. 1960. Translated by Charles A. Meyer and Co., Inc. 15 pages.
- HORIO, M., and TAKAHAMA, M. Continuous prehydrolysis in sulfate process for preparation of dissolving pulp.

  Journal of Japan Technical Association of Pulp and Paper Industry, Vol. 13, No. 1, January 1959. Translated by the Charles A. Meyer and Co., Inc. 7 pages.
- HOFMANN, H. and BILL, W. Velocity-determining factors in reactions with suspended catalyst. (Geschwindigkeitsbestimmende Faktoren bei Reaktionen mit suspendiertem Kontakt). Chemie-Ing.-Techn. 31:2 (1959). Translated by Research Information Service. 20 pages.
- GIERTZ, H. W. Latest developments and future possibilities of the sulfite process (Sulfitmetodens senaste utveckling och framtid möjligheter). Norges Tekniske Högskole, Trondheim, Norway, November 1959.

  Translated by Research Information Service. 23 pages.
- KLAUDITZ, W. and STEGMANN, G. The suitability of poplar wood for the manufacture of particle boards. (Über die Eignung von Pappelholz zur Herstellung von Holzspanplatten). Holzforschung 11 (1958), No. 5/6. Translated by Research Information Service. 15 pages.
- LEPITRE, C. The choice of loading gear. What technique to adopt? (Le Choix d'un Engin de Chargment.

  Quel Procédé Adopter?). Bois et Forêts des Tropiques,
  No. 67, (Sept.-Oct. 1959). Translated by Research
  Information Service. 25 pages.
- 390 PETROVA, V. N. and SYCHEV, N. A. Morphological and biochemical changes in straw during the process of electrochemical delignification. Russian Journal of Applied Chemistry XXVII, 5, 1954. Translated by Dimitri Pronin. 6 pages.

- 391 SCHULTZE-DEWITZ, G. The relation of crown height to annual ring growth and medullary ray components in spruce of various age classes. (Einfluss der Kronenhoehe auf den Jarringbau sowie auf die Faserlaenge und den Markstrahlenanteil bei der Fichte verschiedener Altersklassen). Holzforschung und Holzverwertung 11(1959) 3, pages 67-74. Translated by Research Information Service. 20 pages.
- EBERL, W. and GRATZL, A. Swelling and shrinkage of wood. (Quellen und Schwinden des Holzes). Holzforschung und Holzverwertung 11 (3):60-67, 1959.

  Translated by Research Information Service. 20 pages.
- 394 SCHULTZE-DEMITZ, G. Influence of the sociological position on growth rings, and wood elements of pines, mountain pines, and larches in a natural forest. Nr. 65, Holz-Zentralblatt, Stuttgart, May 31, 1958. Translated by Charlotte Hiller. 14 pages.
- LLOYD, COLONEL A. H. The use of aerial cableways in the tropics for extraction of timber (L'utilisation des cables aériens pour le débardage des bois en zone tropicale). Bois et Forêts des Tropiques, No. 68, November-December 1959, pages 21-29. Translated by Research Information Service. 15 pages.
- FREY-WYSSLING, A, MUHLETHALER, K., and BOSSHARD, H. H. The microscopical resolution of the torus strands in bordered pits. Holz-Forschung und Holz-Verwertung 11, Jahrgang (October 1959) Heft 5. Translated by Charlotte Hiller. 7 pages.
- 397 BRECHT, W., and VOLK, W. Measuring devices for fiber length determinations (Apparative Verfahren der Faserlangen-MeBtechnik). Das Papier 12(9/10):197-200. 1958. Translated by Charlotte Hiller. 12 pages.
- BYVSHYKH, M. D. Influence of temperature and moisture of wood on its elastic properties. "Woodworking Industry" 8(2) 13-15. June 1960. Translated by Dimitri Pronin. 11 pages.

- SAUER, E. The thorn-like formations on a hybrid of two balsam poplars (Stachelähnliche Bildungen bei einem Bastard zwischen zwei Balsampappeln). May 1960. Translated from the German by Dimitri Pronin. 4 pages.
- HORVAT, IVO. The fir forests of Croatia as related to plantsociology and forestry (Die Tannenwälder Kroatiens im pflanzensoziologischen und forstlichen Zusammenhang).

  Translated by Dimitri Pronin. May 1960. 13 pages.

